



HOW TO...

Use gradient fills

Adam Banks shows you how to create more realistic 3D shading effects on your drawings using gradient fills

In *Shopper* October 2005, we showed you how to use bezier curves to construct neat, accurate shapes. To turn a simple outline into an illustration, however, you need to add fills. These days even basic drawing programs, such as the free Serif DrawPlus 4 (from www.freerisefsoftware.com), provide complex gradient fills that can create convincing shading.

There are two basic types of gradient fill: linear and radial. A linear fill graduates from one colour to another in a straight line, while a radial fill starts with one colour at a centre point, then graduates outwards. DrawPlus 4 has a standard (circular) radial fill, which graduates evenly in all directions, and an elliptical fill, which works outwards in concentric ovals. You can add multiple colours to each gradient.

Apart from spheres and cylinders, there aren't many 3D forms that can be represented using a single gradient. A wine glass has three elements – the bowl, stem and base – plus the wine it contains, which will be a different colour. So, having drawn it as a single shape, you'll need to divide it into four objects and apply a fill to each. Here's how.

1 Open the wine glass drawing we created in the October issue, or open the file *Wineglass.dpp* on this month's cover disc. You currently have one object with a black outline. You need four separate objects to fill (bowl, wine, stem and base), so start by making four copies of this. Click the shape to select it, then cut it (type Ctrl-X) and paste four times (Ctrl-V). This gives you

four copies of the shape on top of each other. Next, click the QuickShapes icon that's fifth down in the toolbox on the left and choose QuickEllipse from the options that appear. Click and drag to draw an ellipse that encompasses the bowl of the glass.

2 The ellipse takes on the current default fill, which in this case is solid black. Hold the Shift key and click the glass shape to select it at the same time as the ellipse. (In fact, you've selected the topmost of the four copies.) In the toolbar at the top, click the Intersect icon. The selected shapes are converted into a single shape comprising only the overlapping area: the bowl of the glass.

3 Using the Line tab on the right, remove this shape's outline by setting Line Width to None. Then click the Fill tab, set the Fill Type to Ellipse and choose a simple fill with a red centre graduating to black. Now choose the Fill Tool (the bucket icon) from the toolbox on the left. An ellipse with handles is displayed over the fill, allowing you to customise it. Move the red highlight near the bottom of the bowl, to one side, to give the impression of a rounded form and adjust the shape and size to fit the glass.

4 Click the QuickShapes icon and choose QuickBox. Draw a rectangle covering the top part of the glass, which we want to appear empty. Hold Shift and click on the stem of

GRADIENT FILLS AT A GLANCE

- Although professional illustrators use all sorts of tricks for photorealistic shading, you can achieve good results with ordinary gradient fills.
- Combination operations (Add, Subtract and Intersect) make it easy to divide shapes into objects that can be filled separately, without having to do any more drawing.
- You can customise your gradients to create the exact effect you want.

the glass to select the second copy of your glass shape, then use Intersect as before to combine the two. Remove the outline from this new shape, set the Fill Type to Linear, and choose a gradient going from white at the left to grey at the right.

5 Click the base of the glass to select the third copy of the glass shape. Apply an elliptical fill graduating from white to grey, and use the Fill tool to adjust it as shown below to simulate the appropriate shape. Ignore the appearance of the stem for now.

6 Finally, draw a QuickBox starting above the wine glass and coming down to where the stem joins the base. Intersect this with the final copy of the glass shape so that it covers the whole glass except for the base. Send this object behind the rest by pressing Ctrl-B, then bring it in front of the base using Arrange, Order Objects, Forward One. Although the stem ought to be shaded from left to right to make it look rounded, it's more important for the overall realism of the image to create a shadow under the bowl of the glass. So choose a Linear fill going from grey to black, and use the Fill tool to adjust the angle and position to give the effect shown below. **CS**

